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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,635	08/28/2003	Hiroshi Nojima	520.43063X00	5549

24956 7590 02/09/2007

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EXAMINER	
ROBINSON, GRETA LEE	
ART UNIT	PAPER NUMBER
2168	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/649,635	NOJIMA, HIROSHI	
	Examiner	Art Unit	
	Greta L. Robinson	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/19/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 30, 2006 has been entered.

2. Independent claims 21 and 23 have been amended. Claims 1-20 are cancelled.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on December 19, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "**71**" [note Figure 3; page 13 lines 19-20] and "**73**" [note Figure 4; page 15 line 21], and "**78**" [see: Figure 7, page 18 line 5]. Applicant is also requested to include descriptive textual labels for each reference character 71, 73 and 78. Corrected drawing

sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing

sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Specification

6. The disclosure is objected to because of the following informalities: the spacing of the characters makes reading difficult to understand. See for example, page 12 line 1, page 1 line 8, page 15 line 4, and page 25 line 22. Applicant is requested to correct various other occurrences throughout the disclosure.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 21-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims are directed to an abstract idea and do not include a practical application. Regarding the limitation

"calculating a performance level", "reliability level", applicant presents a formula see page 19 lines 1-5, however the formula omits parameter values or clear correlation of to determine result.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 21-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 21 the *disclosures* description of how *calculations* are performed does not appear to be described properly or clearly at **page 18 line 22 through page 19 line 10**. Applicant notes a *formula* for performing calculations as "1,500 x 0.5 + 2,4000 x 4.0 + 20 x 40 = 11,150" this formula is not understood with respect to the limitation "calculating a performance level and a reliability level of each of volumes" [note claim 21 lines 8-12]. Also note, limitation "calculating upper and lower limit values of a threshold value" [claim 21 lines 13-16]. The use as actual numbers or figures as a "formula" is not clear with respect to the processors ability to perform

calculations. It is noted that applicant states any formula may be used; but is not clear as to what type may be implemented since the mathematical expression does not include any type of parameters (i.e. only actual values are presented). Independent claim 23 contains similar limitation, and is therefore rejected for similar reasons as stated [see claim 23 lines 10-23]. Claims 22 and 24 are rejected based on dependency.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21 the following limitation is vague: "calculating a performance level and reliability level of each of volumes according to a type of an application to store the calculated performance and reliability level to the management table, by using attribute information of each of volumes and evaluation function coefficients stored on the management table" [see: claim 21 lines 8-11].

Regarding claim 23, the following limitation is vague: "a first calculating means for calculating a performance level and reliability level of each of volumes according to a type of an application to store the calculated performance and reliability level to the management table, by using an attribute information of each of volumes stored on the management table" [note: claim 23 lines 9-12].

Claims 22 and 24 are rejected based on dependency.

Response to Arguments

13. Applicant's arguments filed November 30, 2006 have been fully considered but they are not persuasive.

In the response Applicant argued the following: the calculation at the top of page 19 shows how to find the performance level 783 of a record 786. *Applicant makes reference to application requirement table 71 (Fig. 3), total volume table 76 (Fig. 6), application requirement table 71 (Fig. 3), and performance table 73 (Fig. 4)*, however these elements are not shown in the drawings. The drawings do not appear to correspond with the noted features to support argument. See response page 5 of the specification indicates how to calculate a performance level 783 from the write performance value 716, read performance value 717, and IOPS 718. The examiner respectfully maintains the rejection cited under 35 USC 112 first paragraph because it unclear as to how the "formula" relates to the cited portion within the disclosure. Applicants "formula" is not consistent with the standard meaning of formula. Note attached dictionary meaning of formula from Microsoft Dictionary fifth edition which states: "A mathematical statement that describes the actions to be performed on numeric values. A formula sets up a calculation without regard to the actual values it is to act upon, such as *A* + *B*, with *A* and *B* representing what ever values the user designates". Applicants "formula" *only* presents actual numbers (i.e. numeric values) of a calculation, and does not include corresponding parameter values which express a

tangible outcome of the expression. It is unclear from the disclosure as to how the numeric values are applied.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yagisawa et al. US Patent Application Publication No. 2005/0065984 A1

Dawson et al. US Patent 6,889,285 B2

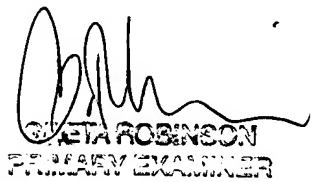
Wada et al. US Patent Application Publication No. 2003/0126190 A1

Microsoft Computer Dictionary Fifth Edition

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Greta Robinson
Primary Examiner
January 31, 2007